REMARKS

Generally

Claims 31 and 34-61 remain pending in the present application. In this Response, claims 31, 49, 50, and 61 have been amended. Exemplary support for the claim amendments can be found throughout the specification and claims as originally filed. See, for example, page 3, line 27 and page 4, line 1 of the present specification. It should be noted that claims 56-60 remain withdrawn pursuant to the Restriction Requirement dated October 2, 2008.

Applicants respectfully request the Examiner to reconsider and withdraw the outstanding rejections in view of the foregoing amendments and the following remarks.

Rejections under 35 U.S.C. § 112

(i) Claims 31 and 61 have been rejected under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the written description. It is the Examiner's position that the claims contain subject matter which was not described in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, it is the Examiner's position that there "is no description of mixing water with the composition, which comprises of hydraulic binder, to form the article" and that the specification "discloses that "Generally, the hydraulic binder is mixed with a composition comprising water and additives to form the articles"". (Office Action, Page 2). Applicants respectfully disagree with the Examiner's position and submit that for example, Example 1 of the present specification provides a method for forming cement cakes in which cement is mixed with water. Moreover, as acknowledged by the Examiner, the specification discloses that "Generally, the hydraulic binder is mixed with a composition comprising water and additives to form the articles". Thus, Applicants respectfully submit that there is certainly sufficient description of mixing water with the composition. In this regard, Applicants respectfully direct the Examiner's attention to M.P.E.P. § 2163.04 which provides that a description as filed is presumed to be adequate, unless or until sufficient evidence or reasoning to the contrary has been presented by the examiner to rebut the presumption. See, *e.g.*, *In re Marzocchi*, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971). In view of at least the foregoing, Applicants respectfully submit that the rejection under 35 U.S.C. § 112, first paragraph, should be withdrawn.

(ii) Claims 49 and 50 have been rejected under 35 U.S.C. § 112, second paragraph as allegedly indefinite. As claims 49 and 50 have been amended for clarity, Applicants respectfully request that the rejection under 35 U.S.C. § 112, second paragraph, should be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 31, 35, 37-44, and 55 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 4,067,758 (hereinafter "Sommer") in view of Nikiforov, A.P., "*Rheological and physicomechanical properties of heavy concrete with additions of a melt of carboxylic acid*," Chemical Abstracts, vol. 120, No. 16, Columbus, OH; Abstract No. 1988874a; Apr. 1994 (hereinafter "Nikiforov") and further in view of U.S. Publication No. 2002/0077390 (hereinafter "Gonnon"). Claims 31, 34, and 36 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Sommer in view of U.S. Patent No. 5,792,252 (hereinafter "Sprouts") and further in view of U.S. Patent No. 4,090,882 (hereinafter "Rauschenfels"). Claims 45-53 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Sommer, Nikiforov, and Gonnon, further in view of U.S. Patent No. 6,461,425 (hereinafter "Brown"). Claim 54 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Sommer, Nikiforov, and Gonnon, further in view of Rauschenfels. Claim 61 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Sommer in view of Sprouts. These rejections are respectfully traversed.

Legal Standards

The Office has the initial burden of establishing a factual basis to support the legal conclusion of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). For rejections under 35 U.S.C. § 103(a) based upon a combination of prior art elements, in *KSR Int'l v. Teleflex Inc.*, 127 S.Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007), the Supreme Court stated that a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006).

It should be noted that the presently pending independent claims 31 and 61 recite the transitional phrase consisting essentially of. Applicants respectfully submit that the Examiner must accord patentable weight to "consisting essentially of" which limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976). Thus, Applicants respectfully submit that the presently recited compositions require either (i) and (ii) (*i.e.*, claim 61) or (i), (ii), and (iii) (*i.e.*, claim 31) and no other materials that materially affect the basic and novel characteristics of the composition.

Present Claims and Disclosure

Amended independent claim 31 recites a process for manufacturing an article of cement or fibrocement comprising one or more superposed layers each less than 5 centimetres thick, obtained by using a composition consisting essentially of (i) a hydraulic binder, (ii) at least one compound which is: an organic compound comprising at least two hydrophilic functions and a hydrophobic chain, or a polyamide oligomer comprising less than 20 repeating units, and (iii) an additive selected from the group consisting of latex, fibres, and a water-soluble amphiphilic copolymer, the process comprising: mixing the composition with water to form the article.

Amended independent claim 61 recites a process for manufacturing an article of cement or fibrocement comprising one or more superposed layers each less than 5 centimetres thick, obtained by using a composition consisting essentially of (i) a hydraulic binder and (ii) at least one compound which is: an organic compound comprising at least two hydrophilic functions and a hydrophobic chain, or a polyamide oligomer comprising less than 20 repeating units, the process comprising: mixing the composition with water to form the article.

Applicants respectfully submit that the present disclosure relates to articles of cement or fibrocement. These articles of cement or fibrocement are either made of (i) a hydraulic binder and of (ii) an organic compound and/or a polyamide oligomer, as recited in new claim 61, or made of (i) a hydraulic binder, (ii) an organic compound and/or a polyamide oligomer, and of (iii) an additive, as recited in claim 31. It should be noted that hydraulic binders are generally cements based on calcium silicates and/or mineral aluminates or plasters based on calcium sulphate used in numerous industries, particularly in the construction field for

making the infrastructure of buildings, works of art, apartment buildings or articles such as paving slabs or boards and tiles. (See, for example, page 1, lines 15-21 of the present specification).

Applicants respectfully submit that hydraulic binders may be reinforced with fibres for the manufacture of fibrocements used, for example, as a material for making articles for covering roofs, pipework or tanks. (See, for example, page 1, lines 22-25 of the present specification). Other articles are described, for example, at page 13, lines 5-9 and page 13, lines 17-18 of the present specification. Applicants respectfully submit that such articles of cement or of fibrocement have good mechanical performance and low water absorption. (See, for example, page 2, lines 24-27).

Applicants respectfully submit that the presently recited processes enable obtaining articles of cement or fibrocement having enhanced mechanical strengths and a good protection against water uptake together with a satisfactory water resistance. (See, for example, page 3, lines 1-13 of the present specification). Applicants respectfully submit that these advantages are shown in the examples described in the present specification where both breaking strength and resistance to cracking of the cements and fibrocements are measured and compared to the prior art. (See Examples in the present specification).

Cited Art

Sommer describes a construction element fanned by laminating together sheets of plastic based material by means of a cement adherent to plastics material. Then, a thick coating is formed on the exterior face of the laminated product by means of a mortar. (See Col. 1, lines 59-65 and Col. 2, lines 28-32). The construction element of Sommer is a thermal insulating element. Sommer discusses mortar with a base of hydraulic binder. (Col. 2, line 28).

Nikiforov discloses the use of a melt of dicarboxylic acids like succinic acid, glutaric acid and adipic acid in order to increase the strength of reinforced concrete. (Abstract).

Gonnon discusses cement matrices or hydraulic binders including copolymers. (Abstract). Gonnon teaches the addition of an aqueous dispersion comprising a mineral filler (calcium carbonate) and a dispersing agent (a copolymer) in a hydraulic binder so as to improve the "strength at young ages" of the cement without affecting the workability of the hydraulic binder. (Abstract and paragraph [0023]).

Sprouts describes cementitious compositions comprising a hydraulic binder and at least 1% of a mixture of (a) an alkali metal carbonate and (b) a C1-C6 mono and dicarboxylic acids. (Col. 1, lines 29-45). In Col. 2, lines 26-31, the importance of the addition of both (a) and (b) is taught. According to Sprouts there appears to be a synergism between the two components (a) and (b) which renders crucial the addition of the *two* components in the cement composition. (Col. 2, lines 26-37).

Rauschenfels discusses a building material comprising an inorganic binder selected from the group consisting of Portland cement, alumina cement, calcium silicate, lime and gypsum, structurally reinforced with glass fibers. (Abstract).

Brown discusses cementitious dry cast mixtures containing a derivatized polycarboxylate dispersant which is a polymer comprising units derived from at least a substituted carboxylic acid monomer or substituted ethylenically unsaturated monomer. (Claim 1).

Differences between Cited Art and Present Claims

Initially, Applicants respectfully disagree with the Examiner's argument concerning the difference between the following terms: mortar, concrete and cement. Applicants respectfully submit that mortar and concrete are not both hydraulic binders but rather both can contain a hydraulic binder. Applicants further respectfully submit that cement is a hydraulic binder. Thus, Applicants respectfully submit that concrete and mortar can contain cement. However, Applicants respectfully submit that concrete can further contain sand and mortar can further contain sand and gravel. Applicants respectfully request the Examiner to provide evidentiary support for the position that "concrete is a hydraulic binder". (Office Action, Page 9). In this regard, Applicants respectfully submit that when an Examiner relies on a scientific theory, evidentiary support for the existence and meaning of that theory must be provided. *In re Grose*, 592 F.2d 1161, 201 USPQ 57 (CCPA 1979).

Applicants respectfully submit that Sommer does not disclose or suggest a process for manufacturing an article of cement or fibrocement. Applicants respectfully submit that rather Sommer discusses a process for manufacturing an article of laminated sheets of plastic coated with a thick coat of mortar. Moreover, Applicants respectfully submit that Sommer does not disclose or suggest the use of a composition consisting essentially of: (i), (ii) and (iii), as presently recited. Applicants further respectfully submit that there is no incentive in Sommer for trying to improve the nature of the cement used. Applicants also respectfully submit that

Sommer is directed to a problem of thermal insulation and not to a problem of water penetration in articles of cement or fibrocement.

Applicants respectfully submit that Nikiforov, which has been cited allegedly to cure deficiencies in Sommer, does not disclose or suggest a process for manufacturing an article of cement or of fibrocement. In fact, Applicants respectfully submit that Nikiforov aims to increase the strength of reinforced concrete. Applicants respectfully submit that Nikiforov does not disclose or suggest the use of a composition consisting essentially of: (i), (ii) and (iii), as presently recited. Applicants further respectfully submit that Nikiforov discusses how to enhance the mechanical strength of a reinforced concrete. Applicants respectfully submit that if one skilled in the art were for some reason combining Nikiforov with Sommer, he/she would not have added a dicarboxylic acid to a hydraulic binder, but rather eventually would have added a melt of dicarboxylic acid to the mortar in a process for manufacturing an article made of laminated sheets of plastic. Thus, Applicants respectfully submit that the combination of Sommer and Nikiforov is far from the presently recited claims and the other cited references would not have lead one skilled in the art to achieve the processes presently recited for at least the following reasons.

Applicants respectfully submit that Gonnon does not disclose or suggest a process for manufacturing an article of cement or of fibrocement comprising one or more superposed layers of less than 5 cm thick, as presently recited. Applicants further respectfully submit that the difference between Gonnon and the present claims is also that the addition of (ii) is not disclosed or suggested, and that the presence of the copolymer as dispersing agent in the hydraulic binder is mandatorily associated with the presence of the mineral filler (calcium carbonate), unlike in the present claims where the composition consists essentially of (i), (ii) and (iii). Applicants further respectfully submit that the presently recited articles do not use calcium carbonate.

Applicants respectfully submit that Sprouts does not disclose or suggest a process for manufacturing an article of cement or of fibrocement comprising one or more superposed layers of less than 5 cm thick, as presently recited. Further, Applicants respectfully submit that Sprouts is silent regarding the presence of an additive (iii) and in Sprouts the presence of the dicarboxylic acid in the hydraulic binder is madatorily associated with the presence of the alkali metal carbonate, unlike in the present claims where the composition consists essentially of (i), (ii) and (iii). On the contrary, Applicants respectfully submit that the presently recited

articles do not use alkali metal carbonates. As discussed hereinabove, Applicants respectfully submit that in Sprouts there is a "synergism" between the dicarboxylic acid and the alkali metal carbonate which renders crucial the addition of the two components in the cement composition of Sprouts. Applicants respectfully submit that this is in direct contrast with the present claims.

With regard to Rauschenfels and Brown, Applicants respectfully submit that neither Rauschenfels nor Brown disclose or suggest a process of manufacturing an article of cement or fibrocement comprising one or more superposed layers of less than 5 cm thick, as presently recited. Applicants further respectfully submit that neither Rauschenfels nor Brown disclose or suggest the use of a composition consisting essentially of (i) and (ii), as recited in claim 61 or a composition consisting essentially of (i), (ii) and (iii), as recited in claim 31.

Moreover, Applicants respectfully submit that Sommer, Nikiforov, Sprouts, Rauschenfels, Gonnon, and Brown, each require specific components to obtain each of the specific disclosed compositions each having specifically targeted properties. For example, Sprouts requires the addition of an alkali metal carbonate as an essential component of the cement admixture.

Thus, Applicants respectfully submit that none of the above cited references discloses or suggests the presently recited processes. Further, Applicants respectfully submit that none of the above cited references discloses the manufacture of articles with good mechanical performance and with a good protection against water uptake.

If any combination of the references relied upon the Examiner is used to obtain the presently recited claims, the result will inevitably be a composition which includes other materials that materially affect the basic and novel characteristics of the composition. Accordingly, Applicants respectfully submit that none of the cited references disclose or suggest the presently recited specific compositions. In particular, Applicants respectfully submit that the cited references, alone or in combination, would not lead one of ordinary skill in the art who aims to improve mechanical performance and water penetration properties in articles of cement or fibrocement, to use the presently recited compositions which consist essentially of (i), (ii), and (iii) or (i) and (ii).

In light of at least the foregoing, Applicants respectfully submit that the obviousness rejections should be withdrawn.

Conclusion

Applicants invite the Examiner to contact Applicants' representative at the telephone number listed below if any issues remain in this matter, or if a discussion regarding any portion of the application is desired by the Examiner.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicants respectfully petition for an appropriate extension of time. The fees for such extension of time may be charged to our Deposit Account No. 02-4800.

In the event that any additional fees are due with this paper, please charge our Deposit Account No. 02-4800.

Respectfully submitted,

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